

A88-11717-0

REPORT NO. 8

HUME LIBRARY

JAN 13 1978

Cotton Fiber and Processing Test Results

CROP OF

1977



Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38122 December 30, 1977

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1977

Discussion of Test Results

Southwestern short staple cottons tested through December 23 are longer, more uniform and finer than a year ago, according to the Cotton Division, Agricultural Marketing Service, USDA. Fiber strength is stronger at both zero and 1/8" gage tests. Picker and card waste is lower. Yarns spun from these samples are stronger. Appearance grades are slightly lower. The average spinning potential yarn number is much higher than it was at the same time last season.

Average results for all medium staple cottons tested show fibers to be longer, more uniform and coarser than a year earlier. Shirley Analyzer nonlint content is higher, but picker and card waste is lower. Yarns spun from these samples are weaker and have lower appearance grades. Yarn imperfections are higher.

Medium staple samples tested from the Southeast show about the same fiber characteristics as a year ago. Picker and card waste is lower. Yarns spun from these samples show weaker yarn strength than last season. Appearance grades are lower. The spinning potential is lower.

South Central medium samples tested are longer, more uniform and coarser than a year ago. Fiber strength is weaker at zero gage strength tests. Shirley Analyzer nonlint content is higher, but picker and card waste is lower. Yarns spun from these samples are weaker and have lower appearance grades. Yarn imperfections are higher.

Southwestern medium staple samples tested to date are longer, more uniform and stronger at zero gage than a year ago. Picker and card waste is lower. Yarns spun from these samples are weaker and have lower appearance grades. Yarn imperfections are lower.

Medium staple samples tested from the West are slightly shorter, more uniform and stronger than last season. Shirley Analyzer nonlint content is higher, but picker and card waste is lower this season. Yarns spun from these samples have lower yarn appearance grades. Yarn imperfections are higher.

Southeastern area long staple samples are shorter and coarser than a year ago. Both Shirley Analyzer and picker and card waste are higher than a year ago. Yarns spun from these samples are weaker. Yarn imperfections are fewer. The average spinning potential is lower.

South Central long staple samples tested are longer, more uniform and coarser than a year ago. Both Shirley Analyzer nonlint content and picker and card waste are higher. Yarns spun from these samples are weaker and have higher imperfections than a year earlier. Spinning potential is higher.

Long staple samples tested from the West show fibers to be shorter, less uniform and coarser than a year ago. Shirley Analyzer nonlint content is higher, but picker and card waste is lower. Yarns spun from these samples are weaker. Yarn imperfections are lower. Spinning potential is lower.

- - - - -

These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.^{1/} These reports are available on request from the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN 38122.

^{1/} Summary of Cotton Fiber and Processing Test Results, Crop of 1976, USDA, AMS Cotton Division, June 1977.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States through December 23, 1977

Staple group Area, and Crop year	Lots tested	Fiber test results										Processing test results					
		Fibrograph		Mike fine- ness unif.		Fiber strength Zero gage		S A nonlint gage		P & C waste		Yarn quality		Spin. Skein str.		Appear- Imperf- actions	
		No.	Inches	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	Pct.	lbs. 22s	Index No.	lbs. 22s	Carded yarn	Yarn No.	
<u>Short Staple:</u>																	
Southwest																	
1976	36	0.96	45	4.4	85	21		3.3	7.1	87	112	14				38	
1977	81	0.99	46	4.2	88	22		3.2	5.4	100	109	13				48	
<u>Medium Staple:</u>																	
Southeast																	
1976	45	1.08	45	4.6	85	23		3.1	6.4	106	98	20				56	
1977	36	1.08	45	4.7	86	22		3.2	6.1	96	92	21				50	
<u>South Central</u>																	
1976	119	1.08	44	4.2	88	23		2.7	6.3	108	99	17				56	
1977	123	1.11	45	4.6	86	23		3.5	6.0	104	95	22				57	
<u>Southwest</u>																	
1976	31	1.06	45	4.1	82	22		3.3	6.5	104	96	22				56	
1977	47	1.08	46	4.2	86	22		3.2	5.7	100	90	19				54	
<u>West</u>																	
1976	56	1.12	45	4.2	90	25		2.2	5.7	120	90	19				67	
1977	81	1.11	46	4.3	94	26		2.6	5.3	119	86	21				68	
<u>U.S. Average</u>																	
1976	251	1.08	45	4.2	87	24		2.7	6.2	110	96	19				58	
1977	287	1.10	46	4.5	88	23		3.2	5.8	106	91	21				59	
<u>Significant difference 2/</u>																	
		0.02	2	0.2	2	1		0.5	0.5	4(22s)	5	2				3	

1/ Based on a limited number of samples of modal quality.

2/ Minimum differences considered to be significant for comparisons in this table.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States through December 23, 1977
 1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results					
		Length Span	Unif. gage	Mike gage	Strength 1/8"	SA Non- lint	P&C Waste	Comber Waste	Yarn Quality		Appearance		Imprfctns
									carded	combed	carded	combed	SPY
No.	In.	Per cent.	Rdg.	Mpsi G/tr	Pct.	Pct.	Pct.	Pct.	Lbs. 22s	Lbs. Carded	Indx & Combed	Indx Yarn	No. No.
Long Staple:													
Southeast													
1976	11	1.15	45	4.3	87	25	3.1	6.7	15.8	116	137	103	21
1977	12	1.13	45	4.8	88	23	3.5	7.1	*	99	*	102	18
South Central													
1976	3	1.12	42	3.7	91	26	3.4	6.8	20.3	109	137	97	13
1977	3	1.16	45	4.5	92	24	4.3	7.2	*	106	*	97	103
West													
1976	1	1.20	48	3.8	89	26	2.9	6.4	11.8	147	162	90	30
1977	6	1.18	47	4.1	92	27	3.2	6.0	*	130	*	92	12
Significant Difference 2/		0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	4(22s)	5	5
1/										2(50s)	2(50s)	5	5
2/										2	2	2	3
*													

Based on a limited number of samples of modal quality.
 Minimum differences considered to be significant for comparisons in this table.
 Combed data not available.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1977

Production Area, Classification & Sample Number		Fiber Test Results						Processing Test Results - Carded Yarns					
No	Grade	Digital Fibrograph	Mike	Fiber Strength	Elong- at'n 1/8"	S.A.	Color Raw Stock	P & C	Strength	Elongation	Appearance Index	Imperfect's	Spin. Poten- tial
		2.5% Staple	Unif. span	Zero Gage	1/8"	Non- Lint Gra	Yel Waste	8s or 22s or 7 ₁ tx 27 tx	No				
		In	Pct	Rdg	Npsi	Gtex	Pct	Pct	No	Pct	Pct	No	No
		32s						Lbs	Lbs	Pct	Pct	No	No
SOUTHWEST AREA													
NORTHWEST TEXAS													
AMHERST	31	31	0.94	48	5.3	83	21	6.6	1.7	0	3	4.5	286
2 MID	31	31	0.98	45	4.5	89	22	7.1	2.0	1	3	4.7	294
3 MID	31	31	0.98	45									7.5
NEWCASTLE	32	32	0.97	45	4.1	86	20	7.2	2.7	2	3	4.8	285
													91
													7.0
													95 PERCENT
PADUCAH	31	32	1.02	47	4.5	86	22	7.1	2.7	1	4	4.6	299
2 MID	31	32	1.01	46	4.5	88	22	7.1	2.9	1	3	4.6	312
3 MID LT SP	32	32	1.02	46									7.8
PETERSBURG	32	32	1.02	43	3.8	81	21	7.0	2.8	1	3	5.6	293
													97
													7.5
RALLS	32	32	1.05	43	3.3	83	22	7.1	3.1	0	3	4.9	303
													75 PERCENT
SNYDER	31	31	0.98	44	4.0	88	21	6.2	2.7	0	3	4.4	294
													99 PERCENT
													7.3

1/ Cotton stuck to processing rolls

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977

* 100% selected for tests, less than 100% in the area.
Cotton stuck to processing rolls.

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977--(Continued)

Production Area, Classification		Fiber Test Results						Processing Test Results - Carded Yarns					
Sample Number	Grade	Digital Fibrograph	Fiber Strength	Elong- at'n 1/8"	S.A. Non- Lint	Color Raw Stock	P & C Waste	Strength	Elongation	Appearance Index	Imprfect's No.	Spin. Potential	
		Stple span	Mike Zero Unif.	Gage Gage	Gra Yel	22s or 50s or 27 tx	50s or 27 tx	22s or 50s or 27 tx	50s or 27 tx	22s or 50s or 27 tx	No	No	
No	Name & Code	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	No	Pct	Lbs	Lbs	Pct
WEST AREA--(Continued)													
CALIFORNIA													
BUTTONWILLOW	3 SLM	41	35	1.10	43	3.0	93	26	6.0	3.7	1	2	6.4
CHOWCHILLA	3 LM	51	36	1.11	46	4.0	97	28	6.1	3.9	1	2	6.5
COALINGA	3 SLM	41	35	1.06	42	3.4	89	26	6.4	3.7	3	3	5.4
COALINGA	3 MID	31	36	1.10	45	4.0	90	25	6.3	2.6	1	3	4.7
FIREbaugh	3 MID	31	36	1.14	47	4.3	95	27	5.9	2.5	0	3	4.9
FIVE POINTS	3 SLM	41	36	1.15	46	4.2	94	28	6.5	4.0	1	3	5.8
LOS BANDS	3 SLM	41	36	1.11	45	3.6	91	25	6.4	3.8	1	3	6.1
MENDOTA	3 MID	31	36	1.10	46	4.4	92	27	6.5	3.8	0	3	5.1
RIPLEY	4 MID	31	35	1.09	44	4.5	88	24	6.2	2.2	1	3	6.1
SAN JOAQUIN	3 LM	51	36	1.11	45	2.8	90	26	6.4	3.9	2	2	5.5
VISALIA	3 MID	31	35	1.10	46	4.3	102	28	6.0	1.5	1	4	4.5
WESTMORLAND	3 MID LT SP	32	34	1.08	45	5.1	88	22	6.1	2.6	1	3	5.7

UNIVERSITY OF FLORIDA



3 1262 08583 1013